imagine may be fairly put down as only stray birds from a regular and more numerous stream of migrants. The direction that most of these birds came from would indicate they were migrants from the coasts of Arabia and Persia, whatever their destination may have been. One conviction has forced itself on me, viz. the great influence which vessels, more especially large and fast steamers of the present day, may have on the distribution of species of birds. Some of our visitors remained with us for days, and landed on shores most likely out of the line of their migrations; and in one instance a Wagtail (*Motacilla*) remained with us all the way up the Red Sea and Suez Canal, and found a new home on the shores of the Mediterranean.

December 12th, 1876.

XIV.—*On the* Salicariæ *of Dr. Severtzoff.*

By Henry Seebohm.

In 'The Ibis' for 1876 (pp. 83 *et seqq.*), Dresser has given us as pretty a little ornithological puzzle as I have seen for a long time in the *Salicariæ* of Severtzoff's 'Fauna of Turkestan.' There are no less than sixteen or eighteen of them named and, more or less, described. The descriptions of two of them, *S. scita* and *S. arundinacea*, are omitted; but fortunately these are supplied in a letter from Dr. Severtzoff to the editor of 'Stray Feathers' (Str. Feath. iii. p. 420). These two articles will, I think, supply sufficient data to unravel the tangle.

Salicaria turdoides (p. 83) may be dismissed at once as *Acrocephalus arundinaceus* (Linn.).

Salicaria arundinacea (p. 83) might be thought naturally to be either *Acrocephalus streperus* or *A. palustris*. I have never had an opportunity of comparing these two birds in the flesh, and cannot distinguish any difference of general colour or of colour of the legs in the skin. I find, however, that *A. palustris* has a more pointed wing. Out of five of this species in Dresser's collection I find that in one the second primary is equal to the third, and in the four others intermediate in length between the third and fourth. On the other hand, out of ten examples in Dresser's and my own collections of *A. streperus*, eight have the second primary equal to the fourth, and in two it is intermediate between the fourth and fifth. Dresser has identified *S. arundinacea* of Severtzoff with *A. streperus*, without, however, giving any description. I therefore take it for granted that the bill is about the size of that bird's (say culmen ·63 to ·7). From 'Stray Feathers' (*loc. cit.* clause 33) I get the additional information that the tail is shorter than the wing, and the second primary equal to the sixth. The wing is too much rounded for either *A. streperus* or *A. palustris*; the bill is too large and the tail too short for *A. agricola*; but all the three items of information we possess point to *Acrocephalus dumetorum* (Blyth), with which species I am accordingly inclined to identify it.

Salicaria brevipennis (p. 83) is certainly not an *Acrocephalus* at all, the first primary being twice as long as the coverts. We must look for this bird amongst the smaller and greyer species of *Hypolais—opaca, pallida, rama,* or *caligata*. To decide to which of these species it belongs we must have the length of the culmen. This is given as 3¾ lines. This is manifestly an impossible measurement. In Blanford's 'Eastern Persia' (ii. p. 192) we find the following measurements of the culmen of the three smaller of these species given—*H. pallida* ·72 to ·68 inch, *H. rama* ·68 to ·57, and *H. caligata* ·55 to ·5. Severtzoff's measurements are undoubtedly those from the point of the bill to the beginning of the feathers. I shall shortly identify, from evidence independent of the length of the culmen, the next species, *S. capistrata*, Sev., with *Acrocephalus agricola* (Jerd.). Severtzoff gives 4 lines as the length of culmen of *S. capistrata*. The true length of culmen of *A. agricola* is ·55. We may therefore construct the following table for translating Severtzoff's length of bill in lines into true length of culmen in decimals of an inch:—3½=·51, 3¾=·53, 4=·55, 4½=·62, 5=·69, which we shall find very useful as we go on. The bill of *S. brevipennis* being 3¾ lines, equal to culmen ·53, there can be little doubt that this bird is *Hypolais caligata* (Licht.).

Salicaria microptera (Stray Feathers, iii. p. 425) is a new name given by Severtzoff to the preceding species to replace *S. brevipennis*, Sev. nec Dohrn, and consequently also sinks into a synonym of *Hypolais caligata* (Licht.). As a further confirmation of this identification, I may say that the length of wings and tail agree, as also the *slightly* rounded tail, and the wing-formula,—second equals seventh, or intermediate between sixth and seventh; whereas in *H. rama* I find that out of five skins in my collection, in two the second primary is between the seventh and eighth, in two equal to the eighth, and in one between the eighth and ninth.

Salicaria capistrata (p. 84) is an *Acrocephalus,* not a *Hypolais,* the first primary being only the length of the wing-coverts. The wing-formula—second primary equals the eighth—disposes at once of *A. streperus* and *A. palustris*. The choice therefore lies between *A. agricola* and *A. dumetorum*. The principal characters of these two birds may be summarized as under:—

A. agricola. Length of wing 2·35 to 2·15, tail about the same. Second primary varying in length from between the sixth and seventh to between the eighth and ninth. Culmen ·56 to ·52.

A. dumetorum (p. 84). Length of wing 2·5 to 2·35, tail 10 per cent. shorter than the wing. Second primary varying in length from between the fifth and sixth to between the seventh and eighth. Culmen ·74 to ·64.

In every particular *S. capistrata* agrees with the former and disagrees with the latter; I therefore without any hesitation identify this bird with *Acrocephalus agricola* (Jerd.), and note that Severtzoff himself (Stray Feathers, iii. p. 425, clause 33) comes to the same conclusion.

Salicaria magnirostris, Lilj. (p. 84). This bird has been correctly identified by Dresser with *Acrocephalus dumetorum* (Blyth). In each of the above-mentioned four particulars it agrees with *A. dumetorum* and disagrees with *A. agricola*.

Salicaria turcomana (p. 84). Judging from the length of the first primary, this bird is also an *Acrocephalus*. The wing-formula—second primary equals the fourth—restricts the choice certainly to *A. streperus* or *A. palustris.* My own experience, as detailed under *S. arundinacea,* would lead one to call this bird *Acrocephalus streperus* (Vieill.).

Salicaria macronyx (p. 84). The length of the first primary decides at once that this bird is an *Acrocephalus.* The wing-formula is intermediate between those of *A. streperus* and *A. dumetorum.* The length of the culmen of *A. streperus* is ·7 to ·63; and by our rule the culmen of this bird is ·62; so that we may decide that it is a small bird of whichever species it belongs to, and that in this respect the balance of evidence is slightly in favour of *A. streperus.* The length of wing of *A. streperus* varies from 2·7 to 2·45. The length of wing of our bird is 2 inches 6 lines, or 2·5, and may be that of nearly the smallest *A. streperus* or the extreme largest *A. dumetorum.* As we have already decided, from the size of the culmen, that to whichever species it belongs it is a small bird of that species, the argument is conclusive in favour of its being *Acrocephalus streperus* (Vieill.).

Salicaria eurhyncha (p. 85). The first primary being shorter than the coverts, there is no doubt about this bird being an *Acrocephalus.* The second primary being between the sixth and seventh restricts the choice to *A. agricola* and *A. dumetorum.* The tail being one tenth shorter than the wing, and the culmen measuring ·69, are both conclusively in favour of its being *Acrocephalus dumetorum* (Blyth), whilst the length of wing, 2·33 to 2·42, is more in favour of that bird than of *A. agricola.*

Salicaria sphenura (p. 86). The length of the first primary decides at once that this is an *Acrocephalus.* The wing-formula —second primary equals the sixth, or is intermediate between the fifth and sixth—agrees with *A. dumetorum,* and disagrees with *A. agricola, A. streperus,* and *A. palustris.* The comparative shortness of the tail puts another black mark against *A. agricola.* The culmen, ·62, puts a third black mark against *A. agricola*; and the length of wing puts a fourth; so that I arrive at the conclusion that this bird is *Acrocephalus dumetorum* (Blyth).

Salicaria gracilis (p. 86). The length of the first primary decides, again, that this bird is an *Acrocephalus*. The fact that the wings and tail are of nearly equal length decides in favour of *Acrocephalus agricola* (Jerd.), and against *A. streperus, A. palustris,* and *A. dumetorum*. The wing-formula agrees with *A. agricola,* and disagrees with *A. streperus* and *A. palustris,* whilst the length of wing and culmen confirms *A. agricola* against the other three.

Salicaria obsoleta (p. 87). This bird, with first primary twice as long as the coverts, must be a *Hypolais*. The bill is said to resemble that of the next species, which is given as 4 lines, or culmen ·55, the dimensions of *Hypolais caligata* (Licht.), which I take it to be. The wing is slightly more pointed than usual.

Salicaria pallida (p. 87) agrees, in length of first primary, wing-formula, length of culmen, wing, and tail, with *Hypolais caligata* (Licht.).

Salicaria tamariceti (p. 88). Mr. Dresser says that the first primary of this bird is "longer than the wing-coverts;" but 'Stray Feathers' fortunately adds "twice as long as the coverts," so that there can be no doubt about this bird being a *Hypolais*. The second primary being equal to the sixth or seventh, and the culmen ·62 to ·69, incline me to identify this species with *Hypolais pallida* (Ehr.). My skins from Smyrna vary in length of culmen from ·64 to ·68 inch, and have the second primary intermediate in length between the sixth and seventh. I am inclined to discriminate the two species as under :—

H. rama. Length of wing 2·35 to 2·53, culmen ·57 to ·68. Second primary between the seventh and ninth.

H. pallida. Length of wing 2·45 to 2·7, culmen ·6 to ·72. Second primary between the fifth and seventh.

Salicaria modesta (p. 88). From the remark in 'The Ibis' that the first primary is *rather* longer than the coverts, qualified by that of 'Stray Feathers' that it is *scarcely* longer than its coverts, we may decide at once that this bird is an *Acrocephalus*. The wing-formula restricts the choice to *A. agricola* and *A. dumetorum*. The remark, "bill small," gives the casting vote in favour of *Acrocephalus agricola* (Jerd.).

Salicaria concolor (p. 88) is identified by its first primary as an *Acrocephalus.* The wing-formula puts *A. streperus* and *A. palustris* altogether out of the question, and casts a doubt upon *A. agricola.* The length of the wing and the comparative shortness of the tail (measurements omitted in 'The Ibis,' but fortunately to be found in 'Stray Feathers') dispose of *A. agricola* altogether, and leave us with the conclusion that this bird is *Acrocephalus dumetorum* (Blyth), with a slightly shorter bill than usual (·55).

Salicaria scita. Dresser is probably right in identifying this bird with *Hypolais caligata* (Licht.). In 'Stray Feathers' (iii. p. 426) we learn that the first primary is twice as long as the coverts, that the second primary equals the sixth, and that the beak is small.

Salicaria scitopsis (p. 88). The first primary being twice as long as the coverts marks this bird as a *Hypolais.* The second primary being between the sixth and seventh, the length of wing 2·25, and the culmen ·51, all point to *Hypolais caligata* (Licht.), though the dimensions are somewhat smaller than usual. The wing is not rounded enough for *Phylloscopus fuscatus* or its allies.

XV.—*Supplementary Notes on the Ornithology of Heligoland.*

By Henry Seebohm.

Two articles have already appeared in 'The Ibis' on the ornithology of the island of Heligoland. The first was in 1862 (p. 58), and consisted of a translation of a letter by Dr. J. H. Blasius which appeared in 'Naumannia' for 1858. The second article was written by Mr. John Cordeaux, and appeared in 'The Ibis' for 1875 (p. 172).

The information contained in these articles was so startling that an apology is scarcely necessary for adding corroborative testimony to their general accuracy, for correcting a few unimportant errors, and for mentioning some still more recent novelties of special interest.

Mr. Gaetke's work on the birds of Heligoland is making